

REMARKS

Reconsideration of the application in view of the Amendments and following remarks is respectfully requested.

Status of the Claims

Claim 1 was previously canceled.

Claims 2-9 were previously pending.

Claims 2-7 and 9 stand rejected.

Claim 8 is objected to.

Claims 2, 6 and 7 have been amended. No new matter is added by way of this amendment.

Claim 8 has been canceled without prejudice or disclaimer of the subject matter therein.

Claim 10 is added. No new matter is added.

Claims 2-7, 9 and 10 are currently pending.

Allowable Subject Matter

Applicants would like to thank the Examiner for the indication that claim 8 includes allowable subject matter. Claim 8 stands objected to for depending upon a rejected base claim but would be allowed if rewritten in independent form. Applicants have amended claim 7 to include the subject matter recited in claim 8 and have canceled claim 8.

Status of the Drawings

The drawings are objected to for failing to show every feature of the invention specified in the claims. The Examiner states that Fig. 2 does not show the feature of the plate pieces having a length such that they pass an axial position of the protrusions, as recited in claim 5. The Examiner also states that the reference line III--III originally shown in Fig. 2 but removed in the amendment filed March 13, 2006 should be reintroduced.

Applicants have amended Fig. 2 to include the feature discussed above and recited in claim 5. Support for this amendment may be found in the Specification at page 15, lines 8-23 and in Fig. 3. Applicants have also amended Fig. 2 to include the reference line III--III.

Status of the Specification

The specification is objected to for informalities. The specification has been amended to reintroduce the reference line III--III reinstated in Fig. 2 in accordance with the Examiner's suggestion. Applicants request reconsideration and withdrawal of the objection.

Rejections Under 35 U.S.C. § 112

Claim 6 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner states that the recitation “absorbing ring which does not have the ring portion and the plate pieces” is unclear. The Examiner suggests reciting “the other one of the

energy absorbing rings.” Applicants have amended claim 6 in accordance with the Examiner’s suggestions.

Rejections Under 35 U.S.C. § 103

Claims 2-7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP2000-219139 (“JP ‘139”) in view of U.S. Patent No. 6,109,652 to Kim et al. (“Kim”) and further in view of U.S. Patent No. 3,877,319 to Cooper. The Examiner states that JP ‘139 discloses most of the features of the claimed invention but admits that JP ‘139 does not disclose one of the first or second housing having impact energy absorbing protrusions between the impact rings and the protrusions are separate from each other in an axial direction and contact the other of the first or second housing. The Examiner also admits that JP ‘139 does not disclose impact energy absorbing rings having pieces spaced around protrusions. The Examiner relies on Kim for disclosing an impact energy absorbing column having protrusions that are axially spaced from each other and relies on Cooper for disclosing an impact energy ring having a ring portion contacting an end face of a housing and a plurality of plate pieces disposed continuously with the ring portion. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering apparatus of JP ‘139 to include the protrusions disclosed by Kim and the impact energy absorbing ring disclosed by Cooper to further enhance the impact absorbing ability of the steering apparatus. Applicants respectfully traverse the rejection.

Cooper does not disclose impact energy absorbing rings. Cooper discloses a cylindrical plastic sleeve bearing “which is effective to accommodate dimensional variations between the first

and second tube members without significantly impeding relative axial movement therebetween, additionally the sleeve bearing positively maintains the tube members in axial alignment” (Cooper, column 4, lines 2-7). Cooper’s sleeve bearings do not absorb impact energy, and thus are not impact energy absorbing rings. As sleeve bearings which keep the axial alignment of the tube members, the bearings should translate the impact energy rather than absorb it. Thus, one of ordinary skill in the art would not be motivated to use the sleeve bearings disclosed by Cooper in place of the energy absorbing rings disclosed by JP ‘139. There is no indication that there would be a likelihood of success using such a combination. Accordingly, the Examiner has not established a *prima facie* case of obviousness. Thus, Applicants respectfully request reconsideration and withdrawal of the rejection.

Newly presented claim 10 recites that a plurality of plate pieces attached to the ring portion and disposed at intervals “providing non-contact pathways along the entire length of the one impact energy absorbing ring, the non-contact pathways corresponding to the impact energy absorbing protrusions.” None of the cited references disclose impact energy absorbing rings with non-contact pathways. Accordingly, claim 10 is patentable over the cited references.

CONCLUSION

Each and every point raised in the Office Action dated June 2, 2006 has been addressed on the basis of the above amendments and remarks. In view of the foregoing it is believed that claims 2-7 and 9-10 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

By 

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Attachments

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to Fig. 2.

Application No. 10/723,071
Amendment dated September 5, 2006
After Final Office Action of June 2, 2006

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REPLACEMENT SHEET